



Colorado Science and Engineering Fair

2025 Individual Project Abstract Form

Please print 2 copies of the completed form. Sign both copies, keep 1 for your notebook and submit 1 copy to your Regional Fair Director with your other paperwork.

Title of Project: Who Shrank The Potatoes?! (Question: Which potato would shrink the fastest?)

Finalist's Name: Yasaswini Vinjamuri

School and City: Heritage Heights Academy, Aurora

Sponsor's Name: Yasaswini Vinjamuri

Category: Plant Sciences

Division: Junior (grades 6 - 8)

Abstract (250 words or less):

My experiment proves what osmosis is. The experiment is about potatoes soaked in 4 types of water. The 4 types of water include tapwater, one tsp of salt in water, two tsp of salt in water, and three tsp of salt in water. I placed potatoes in those mediums and measured the potatoes' weight, length, thickness, and texture. The question was to see what type of water would shrink a potato fastest. I suspected that the potato in the most salinated solution would shrink because that salt water solution comparatively had the highest concentration. I based this on osmosis, the movement of water from lower to higher concentration. The tapwater potato had a higher concentration than the tapwater. Lower concentration, the water, moved to the higher concentration, the potato. This is why in the data, the potato in the tapwater gained weight, length, and thickness. Due to the increase of water inside the potato, it became turgid. Before the experiment, all the potatoes were stiff because they had water inside them. In the salt water potatoes, the lower concentration was in the potatoes and the higher concentration was the salt water. The water inside the potatoes transferred into the salt water, resulting in the salt potatoes losing weight, length, and thickness. My hypothesis was half-correct. The most salinated solution shrunk the potato the fastest, but in length and thickness, the two tsp of salt did, too. However, the most salinated potato lost mass faster than the rest by one gram.

I hereby certify that the above statements are correct and the information provided in the Abstract is the result of one year's research. I also attest that the above properly reflects my own work.

Finalist's Signature:

Date:

In addition, all students must complete the ISEF Student Checklist (1A), Research Plan, Approval Form (1B), and Checklist for Adult Sponsor (1), and any other ISEF forms required for this type of project. See the International Rules and Guidelines for form requirements. Return COPIES of all of these forms to your Regional Fair Director with you Finalist Verification/Permission Form. **A signed copy of this form must be included in your notebook.**